CDP-597

SERVICE MANUAL

US Model
AEP Model
UK Model

Model Name Using Similar Mechanism	NEW
CD Mechanism Type	CDM14-5BD8A
Optical Pick-Up Block Type	BU-5BD8A

SPECIFICATIONS

Compact disc player

Frequency response	2 Hz – 20 kHz ±0.5 dB
Signal to noise ratio	More than 105 dB
Dynamic range	More than 98 dB
Harmonic distortion	Less than 0.003%
Channel separation	More than 102 dB

Outputs

LINE OUT (FIXED) (phono jacks)
Output level 2 V (at 50 kilohms)
Load impedance over 10 kilohms

LINE OUT (VARIABLE) (phono jacks)
Output level max. 2 V
(at 50 kilohms)
Load impedance over 50 kilohms

DIGITAL OUTPUT (OPTICAL) (optical output connector)
Wave length 660 nm
Output level – 18 dBm

PHONES (stereo phone jack)
Output level max. 10 mW
Load impedance 32 ohms

General

Power requirements	120 V AC, 60 Hz (US model) 220 – 230 V AC, 50/60 Hz (AEP, Germany model) 240 V AC, 50/60 Hz (UK model)
Power consumption	12 W
Dimensions	Approx. 430 × 110 × 295 mm (w/h/d) (17 × 4 3/8 × 11 5/8 inches)
Weight	Approx. 3.7 kg (8 lbs 3 oz), net

Remote commander (RM-D597)

Remote control system	Infrared control
Power requirements	3 V DC with two batteries size AA (IEC designation R6)
Dimensions	Approx. 40 × 20 × 175 mm (w/h/d) (1 5/8 × 13/16 × 7 inches)
Weight	95 g (3.3 oz) Including batteries

Supplied accessories

Connecting cord (1) (2 phono plugs ↔ 2 phono plugs)
Remote commander (1)
Sony SUM-3 (NS) batteries (2)

Optional accessory

Audio Optical connecting cord POC-15

Design and specifications are subject to change without notice.

MICROFILM

COMPACT DISC PLAYER

SONY®

TABLE OF CONTENTS

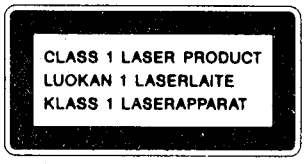
Section	Title	Page
	Specifications	1
	Servicing Note	2
	Model Identification	2
SECTION 1.	**GENERAL**	
1-1.	Location of Controls	3
SECTION 2.	**DISASSEMBLY**	4
SECTION 3.	**ELECTRICAL BLOCK CHECKING**	5
SECTION 4.	**DIAGRAMS**	
4-1.	Block Diagram	7
4-2.	Circuit Boards Location	9
4-3.	Semiconductor Lead Layouts	9
4-4.	IC Block Diagrams	10
4-5.	Printed Wiring Boards (MAIN Section)	12
4-6.	Schematic Diagram (MAIN Section)	15
4-7.	Printed Wiring Boards (MD Section)	18
4-8.	Schematic Diagram (MD Section)	19
SECTION 5.	**EXPLODED VIEWS**	
5-1.	General Section	21
5-2.	CD Mechanism Section (CDM14-5BD8A)	23
5-3.	Opticai Pick-Up Block (BU-5BD8A)	24
SECTION 6.	**ELECTRICAL PARTS LIST**	25

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30cm away from the objective lens.



This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.

SERVICING NOTE

1) Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270°C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

Notes on chip component replacement

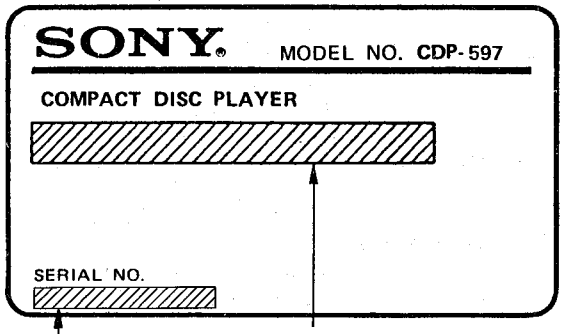
- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

MODEL IDENTIFICATION

—Model Number Label—



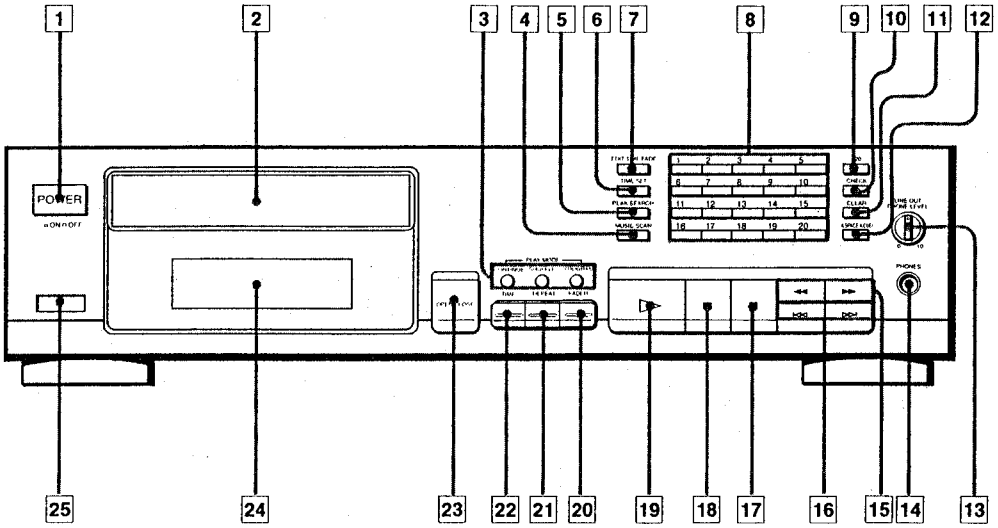
US Model:	AC: 120V~60Hz
AEP, Germany Model:	AC: 220V—230V~50/60Hz
UK Model:	AC: 240V~50/60Hz

US, AEP Model: MADE IN JAPAN
AEP, UK, Germany Model: MADE IN FRANCE

SECTION 1
GENERAL

This section is extracted from instruction manual.

1-1. LOCATION OF CONTROLS



Refer to the pages indicated in ( ) for details.

1. POWER switch (page 10)
2. Disc tray
3. PLAY MODE buttons
   CONTINUE button (page 10)
   SHUFFLE button (pages 14 and 15)
   PROGRAM button (pages 18 and 22)
4. MUSIC SCAN button (page 16)
5. PEAK SEARCH button (page 27)
6. TIME SET button (pages 24 and 26)
7. EDIT/TIME FADE button (pages 24 and 26)
8. Numeric buttons (page 12)
9. >20 (over 20) button (page 12)
10. CHECK (program check) button (pages 18 and 23)
11. CLEAR (program clear) button (pages 15 and 18)
12. A.SPACE (auto space)/A.CUE (auto cue) button (pages 13 and 27)
13. LINE OUT/PHONE LEVEL control (pages 7 and 10)
14. PHONES jack
15. ◀◀ ▶▶ (manual search) buttons (page 12)
16. I◀◀ ▶▶I AMS* buttons (pages 12 and 22)
17. ■ (stop) button (page 10)
18. ❚❚ (pause) button (page 10)
19. ▶ (play) button (page 10)
20. FADER (fade in/fade out) button (page 20)
21. REPEAT button (page 17)
22. TIME button (page 11)
23. ⏏ OPEN/CLOSE button (page 10)
24. Display window (page 11)
25. Remote sensor

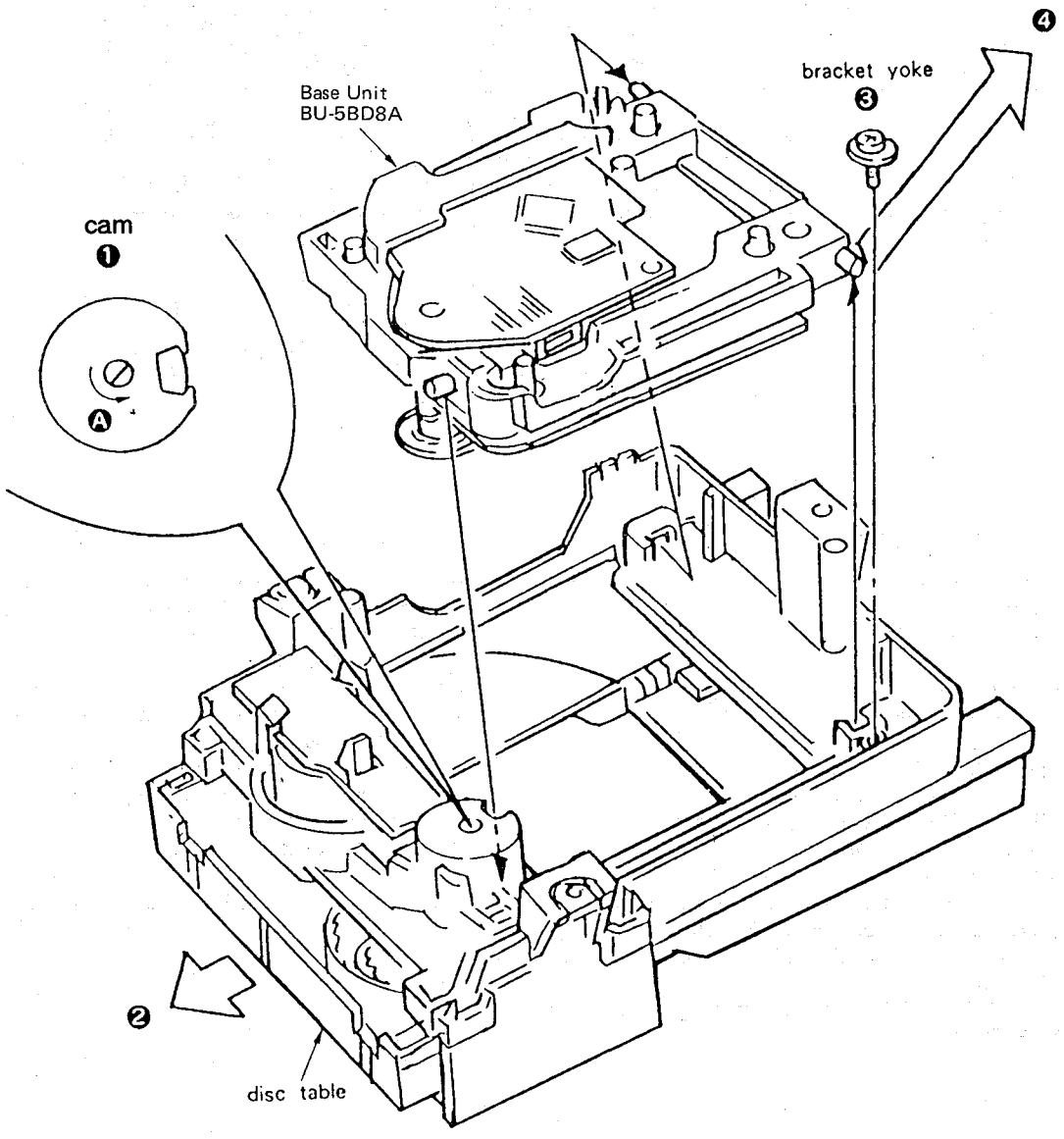
* AMS is the abbreviation of Automatic Music Sensor.

SECTION 2
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

BASE UNIT REMOVAL

1. Remove CD mechanism from the set and turn over.
2. Turn the cam ❶ in the Arrow Ⓐ direction by the⊖driver.
3. Take out disc table ❷.
4. Remove bracket yoke ❸ .
5. Remove BU-5BD8A ❹ in the Arrow ❹ direction.

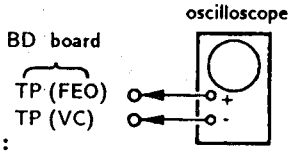


SECTION 3
ELECTRICAL BLOCK CHECKING

Note :

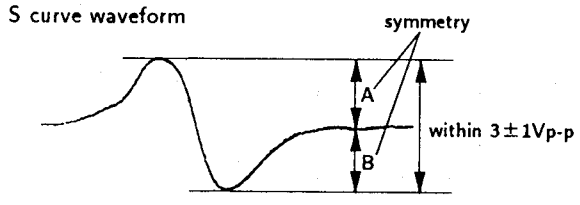
1. CD Block basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than 10MΩ impedance.
4. Clean an object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

S Curve Check



Procedure :

1. Connect oscilloscope to test point TP (FEO) on BD board.
2. Connect between test point TP (FEO) and TP (VC) by lead wire.
3. Turned Power switch on and actuate the focus serch. (actuate the focus serch when disc table is moving in and out.)
4. Check the oscilloscope waveform (S curve) is symmetrical between A and B. And confirm peak to peak level within 3±1Vp-p.

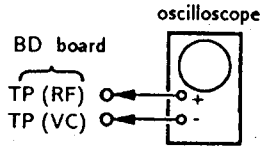


5. After check, remove the lead wire connected in step 2.

Note : • Try to mesure several times to make sure that the ratio of A : B or B : A is more than 10 : 7.

• Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check

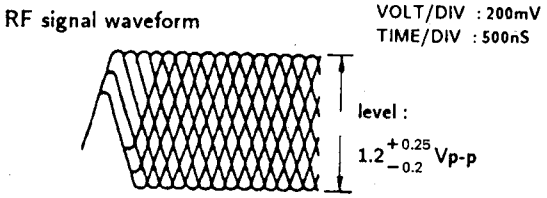


Procedure :

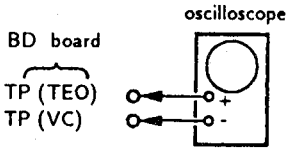
1. Connect oscilloscope to test point TP (RF) on BD board.
2. Turn Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

Note :

Clear RF signal waveform means that the shape "◇" can be clearly distinguished at the center of the waveform.

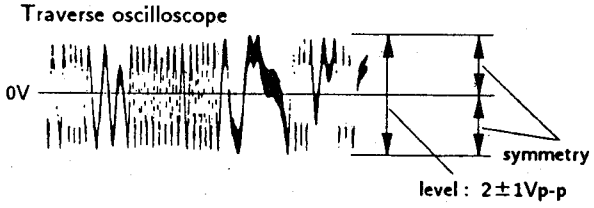


E-F Balance Check



Procedure :

1. Connect test point TP (ADJ) to ground and TP (TEI) to TP (VC) with lead wire.
2. Connect oscilloscope to test point TP (TEO) on BD board.
3. Turn Power switch on.
4. Put disc (YEDS-18) in and playback.
5. Confirm that the osilloscope waveform is symmetrical on the top and bottom in relation to 0V, and check this level.

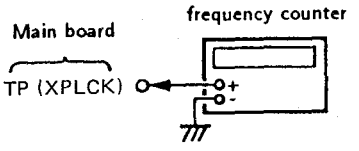


6. Remove the lead wire connected in step 1.

RF PLL Free-run Frequency Check

Procedure :

1. Connect frequency counter to test point (XPLCK) with lead wire.

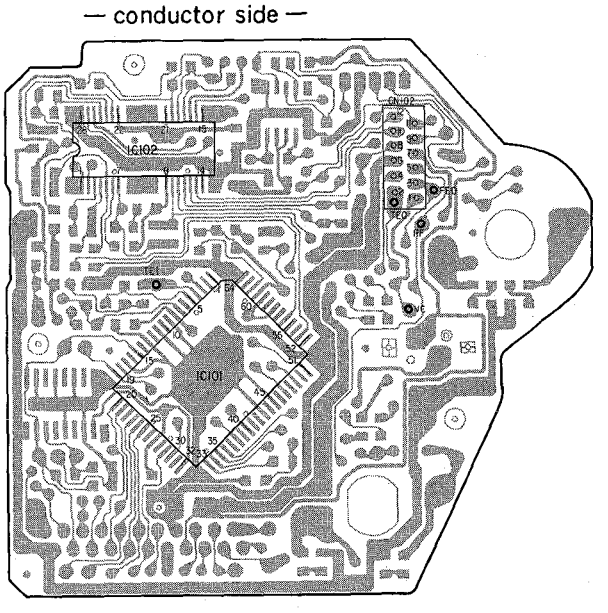


2. Turn Power switch on.
3. Confirm that reading on frequency counter is 4. 3218MHz.

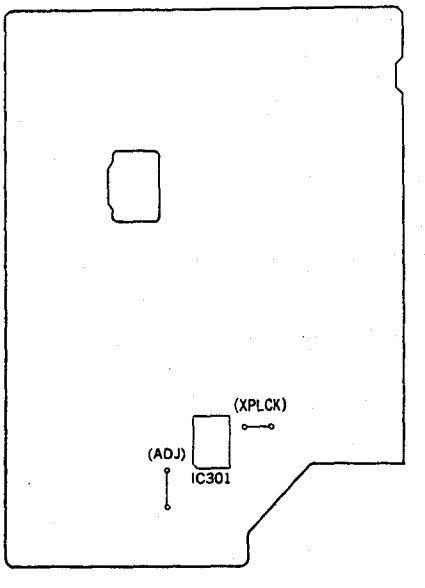
Focus/Tracking Gain

This gain has a margin, so even if it is slightly off. There is no problem.
Therefore, do not perform, this adjustment.
Please note that it should be fixed to mechanical center position when you moved and do not know original position.

Adjustment Locations :
[BD board]

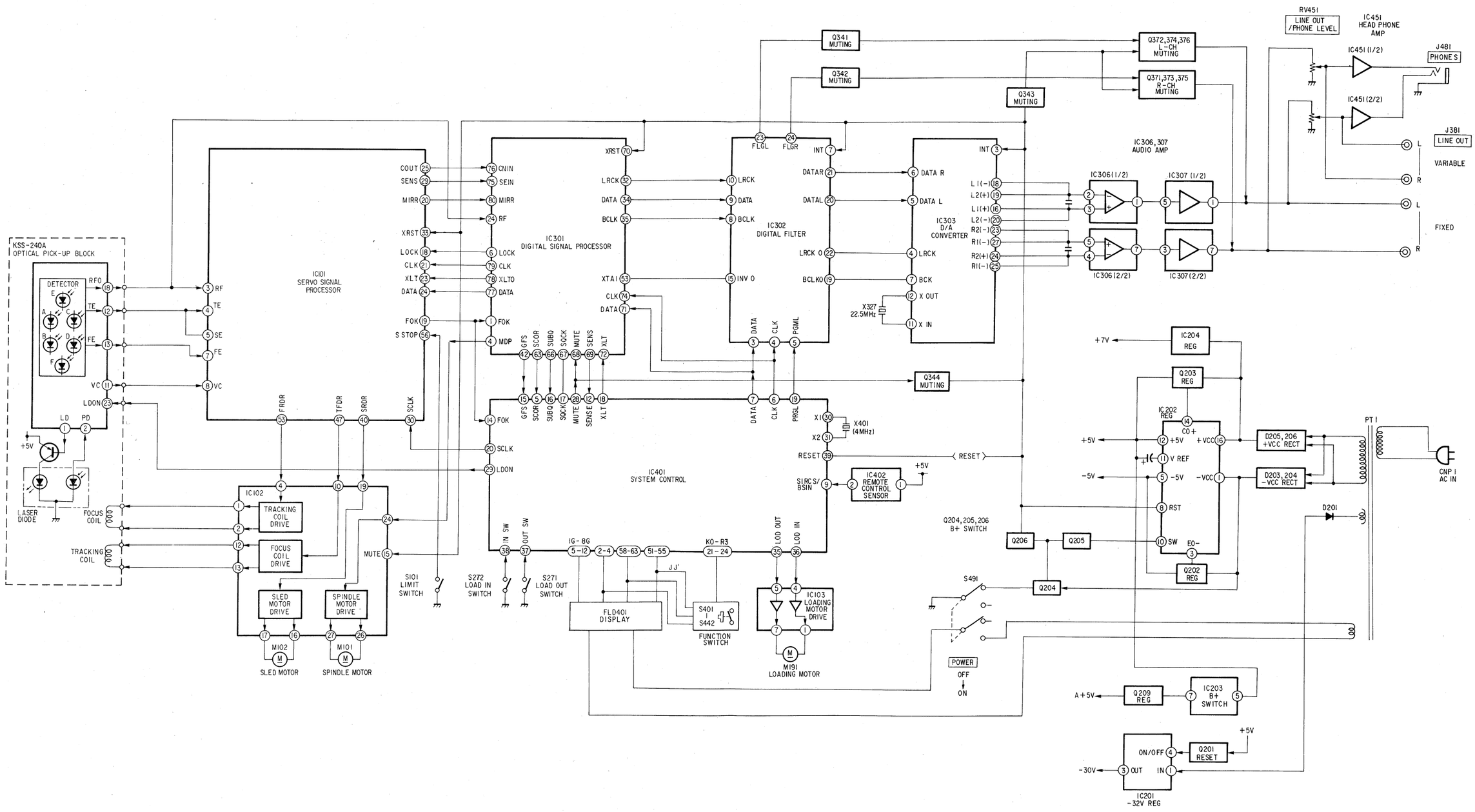


[Main board] —Component Side—

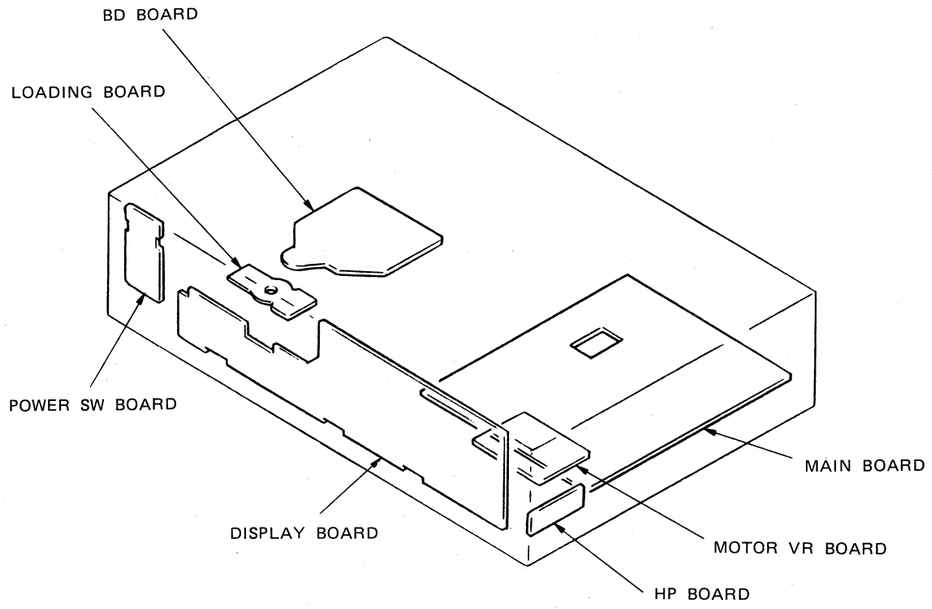


SECTION 4
DIAGRAMS

4-1. BLOCK DIAGRAM

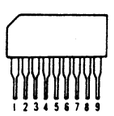


4-2. CIRCUIT BOARD LOCATION

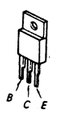


4-3. SEMICONDUCTOR LEAD LAYOUTS

BA6208
RC4556S

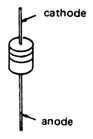


2SA473



2SC3623A-LK

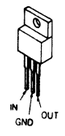
RD5.6ES-B2
RD7.5ES-B2
RD9.1ES-L
1N4148M
11ES2



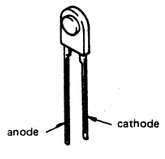
2SA933S-QR
2SC2878-AB

2SD774-34

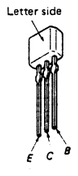
M5F7807



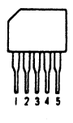
BR4361F



2SA1175-HFE

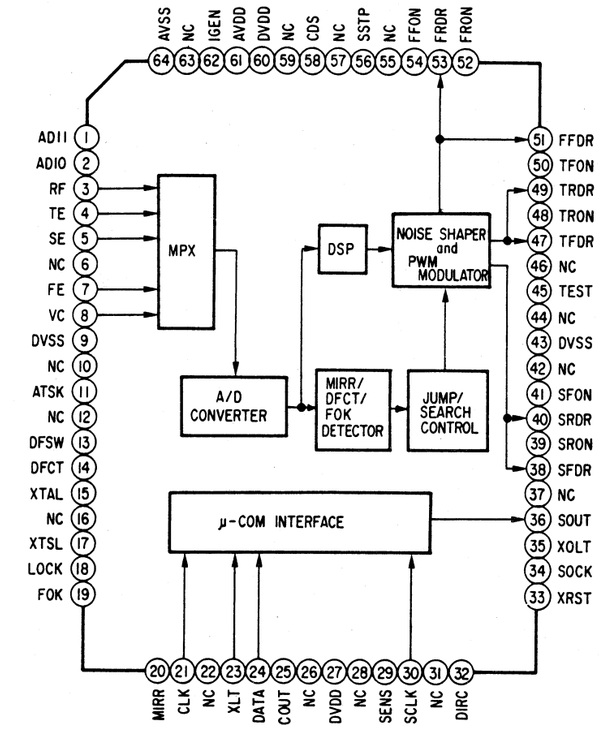


M5293L

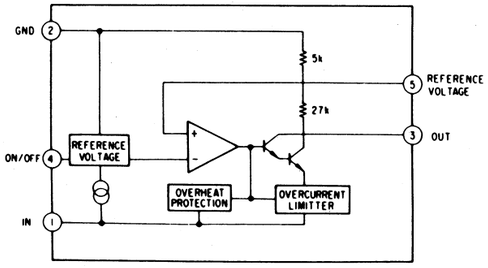


4-4. IC BLOCK DIAGRAM

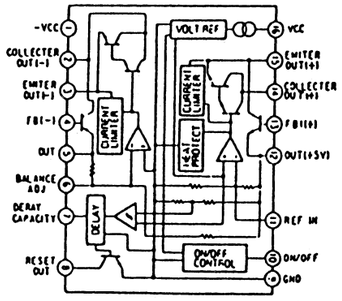
IC101 CXD2501



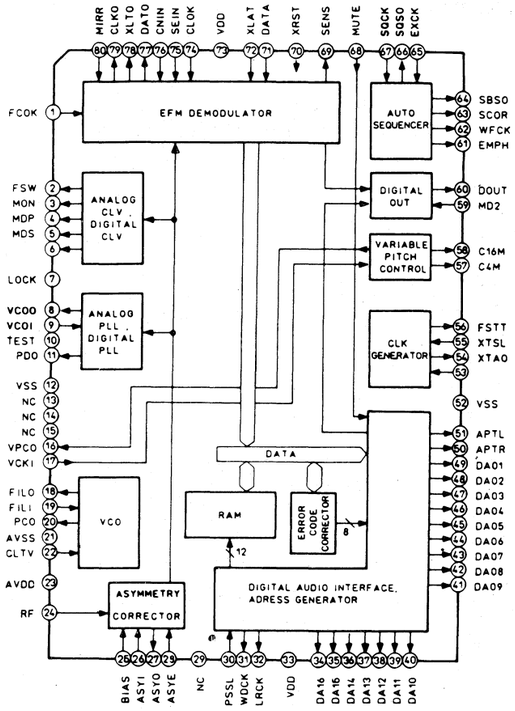
IC201 M5293L



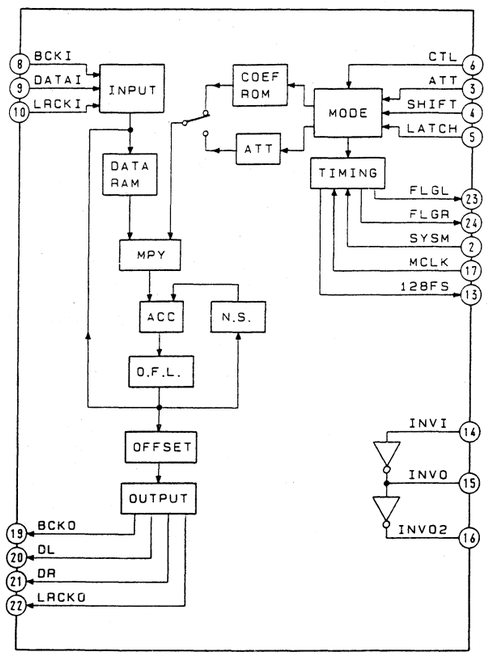
IC202 M5290P-16



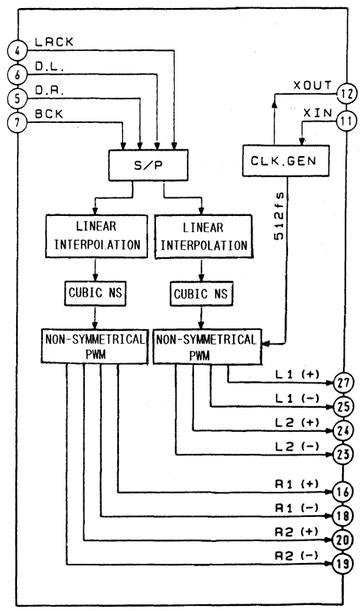
IC301 CXD2500AQ



IC302 CXD2560M

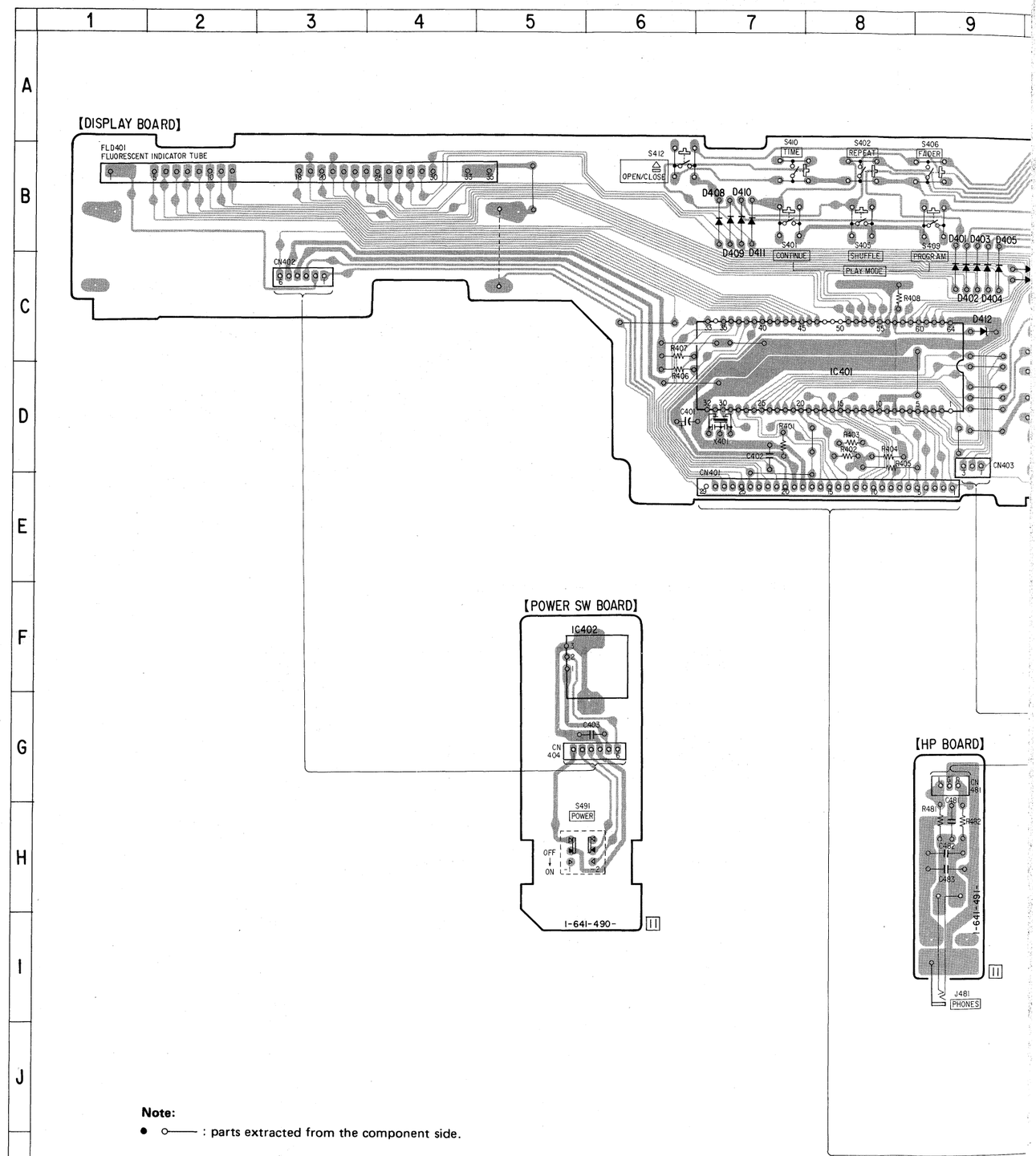


IC303 CXD2561



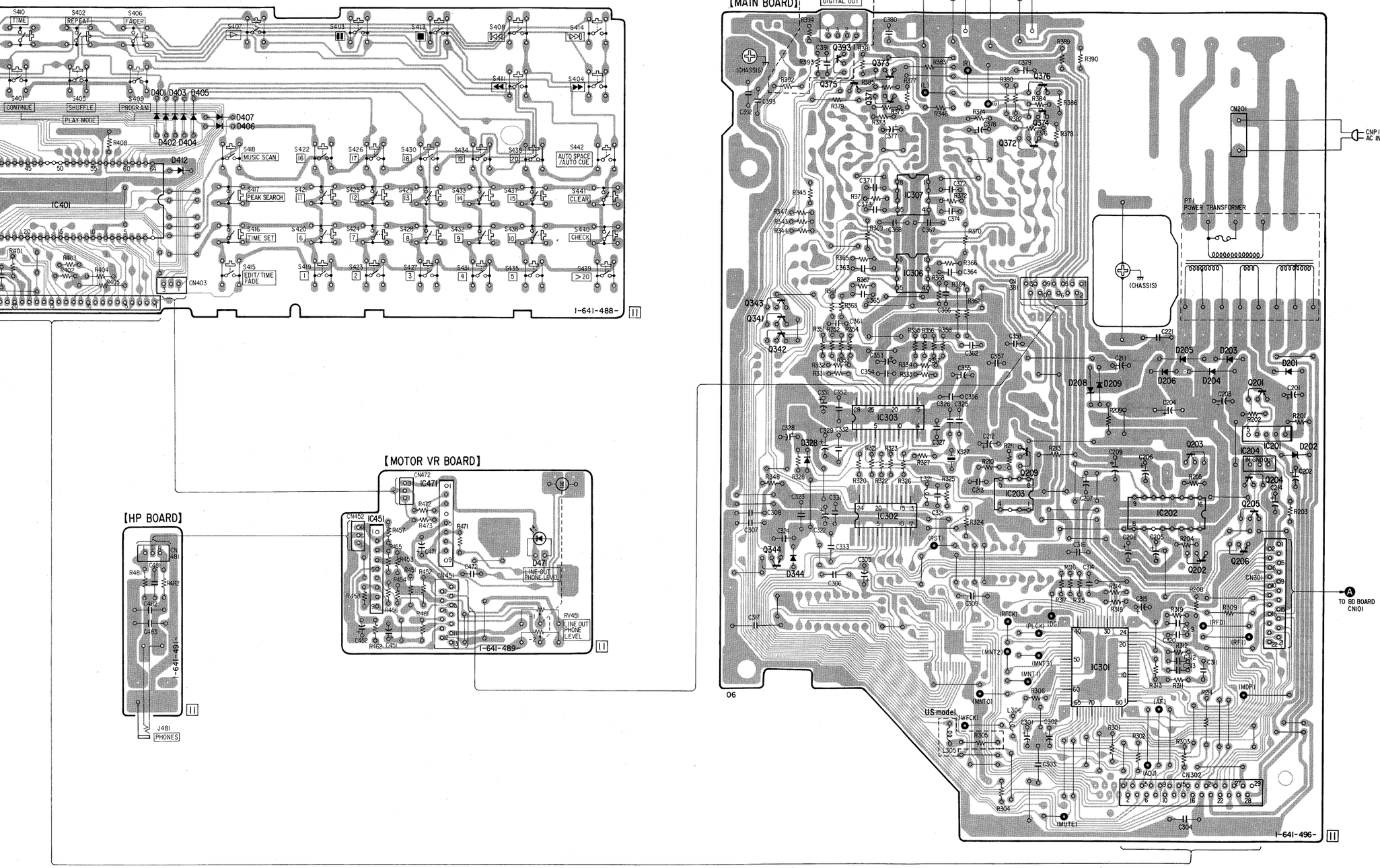
4-5. PRINTED WIRING BOARDS (MAIN Section)

• See page 9 for Semiconductor Lead Layouts.



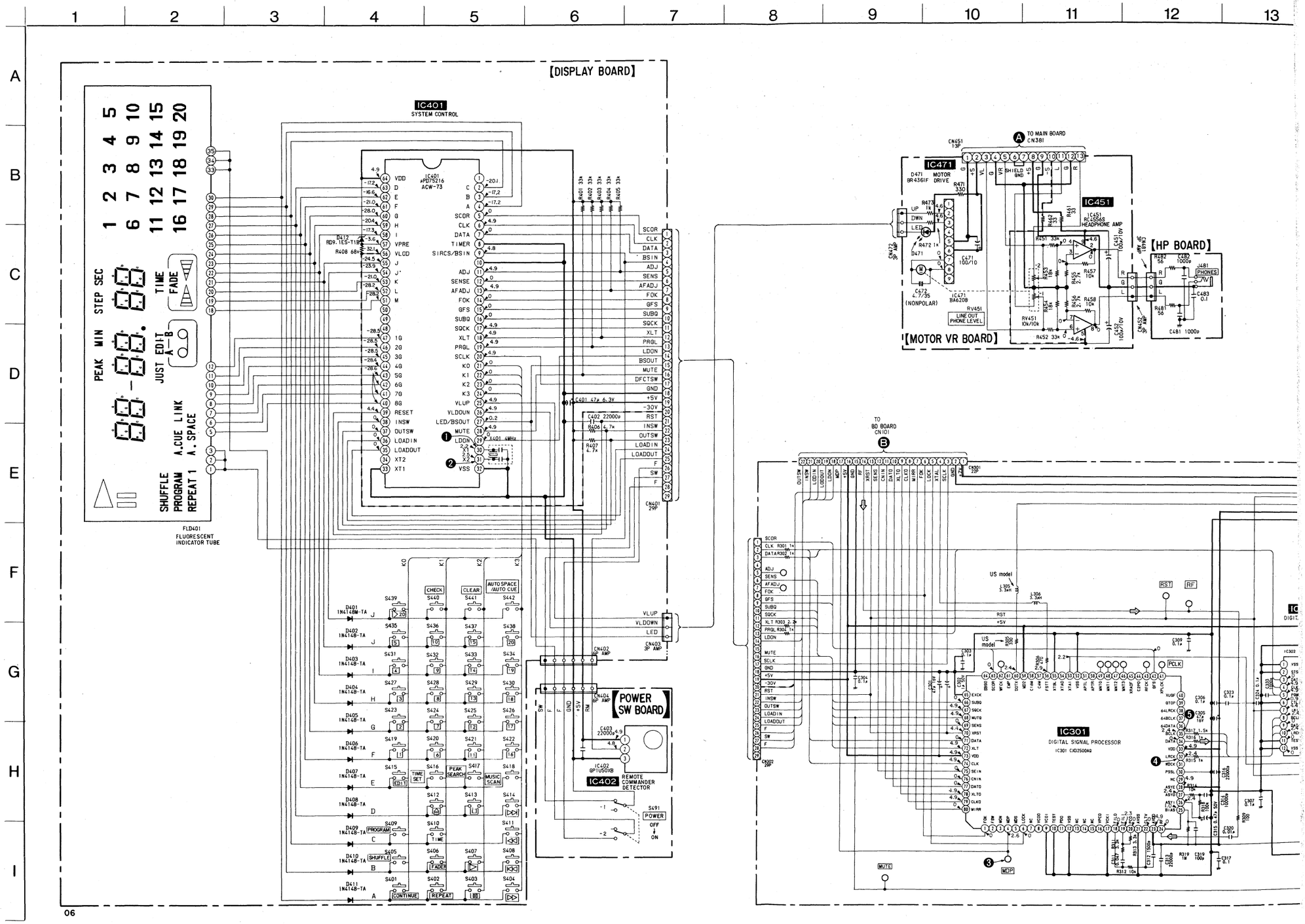
Note:

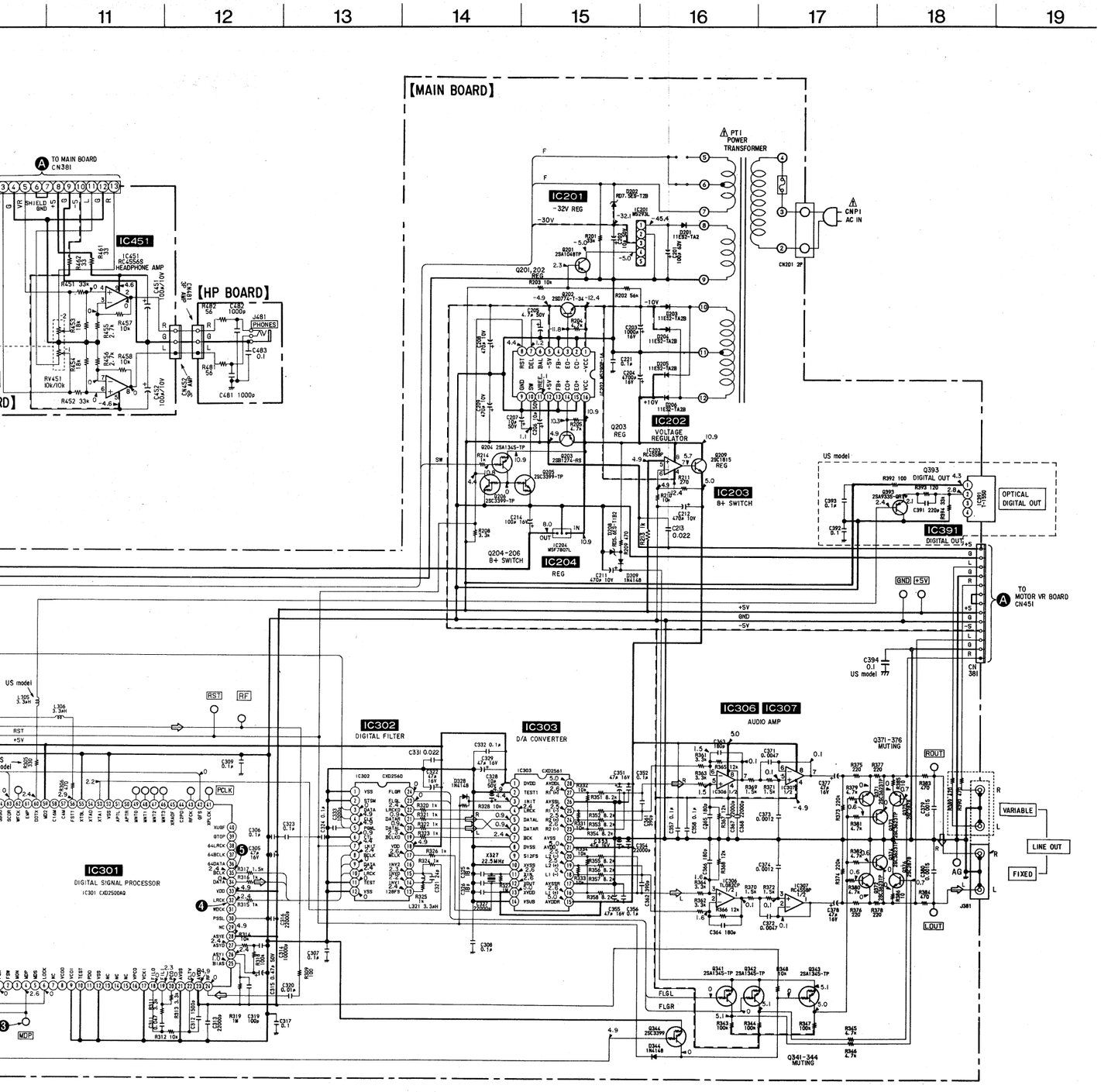
• ○—— : parts extracted from the component side.



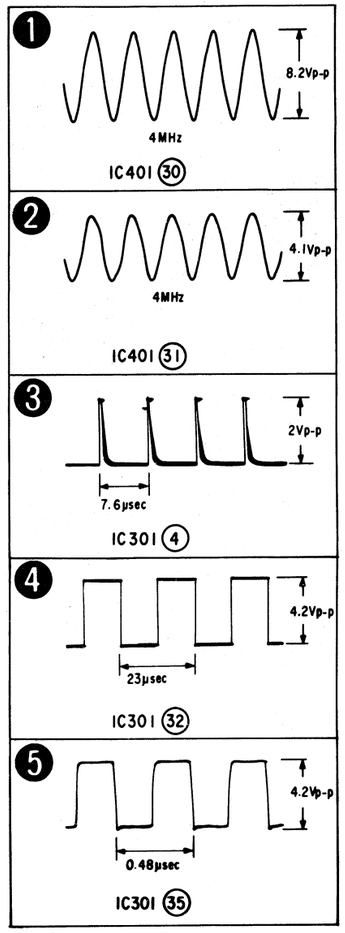
● Semiconductor Location

Ref. No.	Location
D201	E-21
D202	F-21
D203	E-20
D204	E-20
D205	E-20
D206	E-20
D208	E-19
D209	E-19
D328	F-16
D344	H-16
D401	B-9
D402	C-9
D403	B-9
D404	C-9
D405	B-9
D406	C-10
D407	C-10
D408	B-7
D409	B-7
D410	B-7
D411	B-7
D412	C-9
D471	G-13
IC201	F-21
IC202	G-20
IC203	G-18
IC204	F-21
IC301	I-19
IC302	G-17
IC303	F-17
IC306	D-17
IC307	C-17
IC391	A-16
IC401	D-8
IC402	F-6
IC451	G-11
IC471	G-12
Q201	E-21
Q202	F-21
Q203	F-20
Q204	G-21
Q205	G-21
Q206	G-21
Q209	F-18
Q341	E-15
Q342	E-16
Q343	E-15
Q344	G-16
Q371	B-17
Q372	C-18
Q373	B-17
Q374	C-18
Q375	B-16
Q376	B-18
Q393	B-16


【DISPLAY BOARD】
IC401
SYSTEM CONTROL
IC401 μPD75216 ACW-73
FLD401
FLUORESCENT INDICATOR TUBE
PEAK MIN STEP SEC
TIME
FADE
JUST EDIT A—B
SHUFFLE
PROGRAM
REPEAT 1
A.CUE LINK
A. SPACE
CHECK
CLEAR
AUTO SPACE /AUTO CUE
TIME SET
PEAK SEARCH
MUSIC SCAN
PROGRAM
SHUFFLE
FADER
CONTINUE
REPEAT
【POWER SW BOARD】
IC402
REMOTE COMMANDER DETECTOR
POWER
OFF
ON
VLUP
VLDOWN
LED
【MOTOR VR BOARD】
IC471
IC451
【HP BOARD】
TO MAIN BOARD CN381
TO BD BOARD CN101
IC301
DIGITAL SIGNAL PROCESSOR
IC301 CXD2500AQ
US model
RST
RF
PCLK
MUTE
MDP



● WAVEFORMS



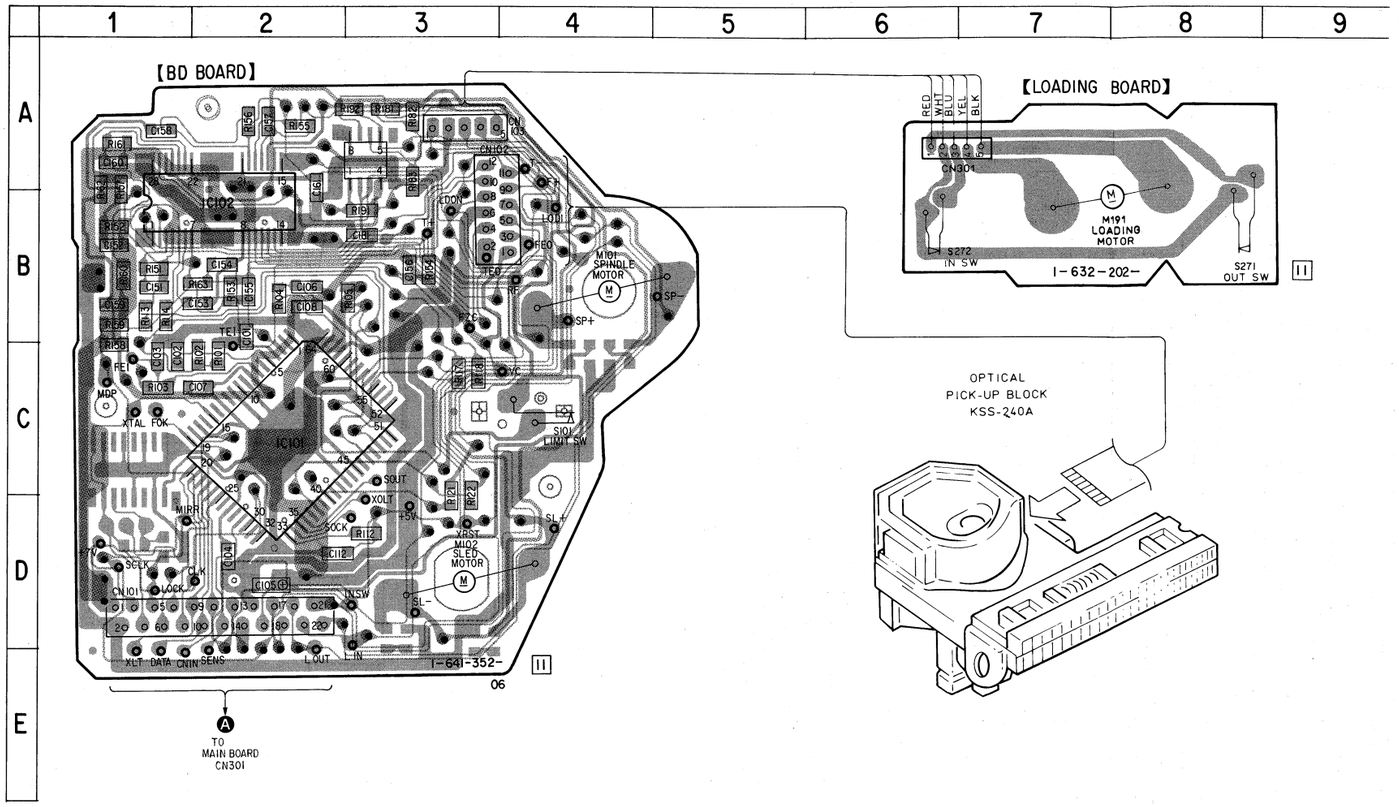
Note:

- All capacitors are in µF unless otherwise noted. pF: µµF 50WV or less are not indicated except for electrolytics and tantalums.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

- ▬▬ : B+ line.
- ▬ ▬ : B– line.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : STOP
- Voltages are taken with a VOM. (Input impedance 10MΩ) Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : CD

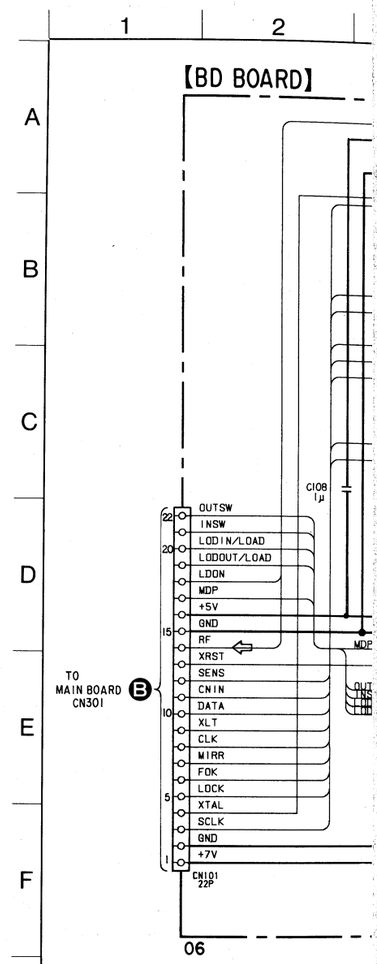
4-7. PRINTED WIRING BOARDS (MD Section) • See page 9 for Semicondcutor Lead Layouts.



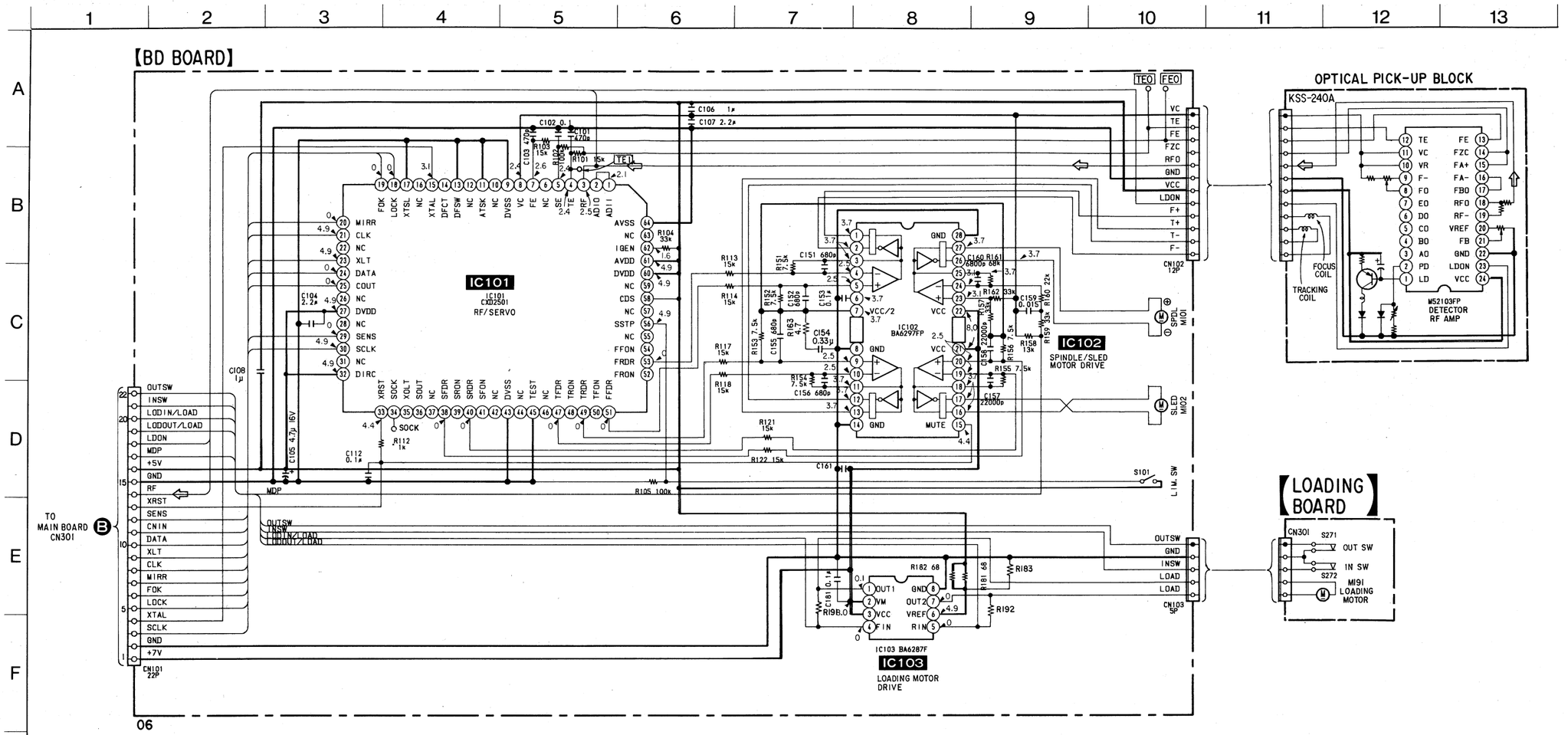
Note:

- ○—— : parts extracted from the component side.
- ● : Through hole.
- ▒▒ : Pattern on the side which is seen.
- ▒▒ : Pattern of the rear side.

4-8. SCHEMATIC DIAGRAM (MI



4-8. SCHEMATIC DIAGRAM (MD Section) ● See page 17 for Note.



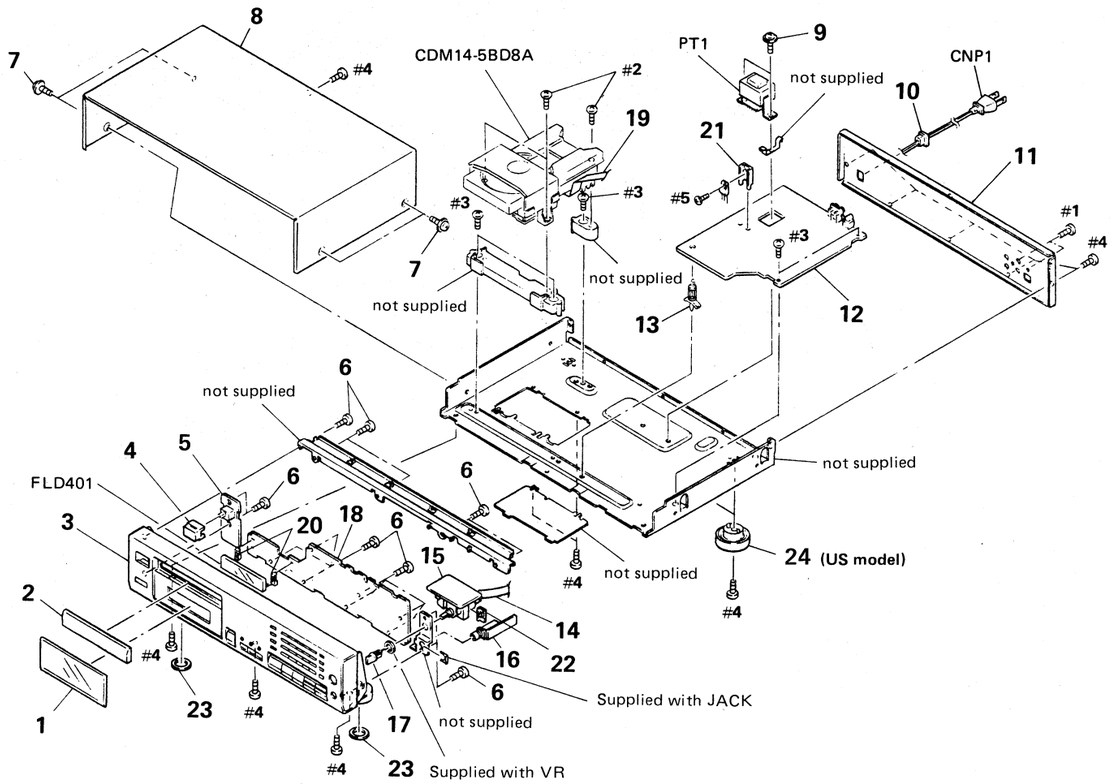
SECTION 5
EXPLODED VIEWS

NOTE:

- –XX, –X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ Parts color ↑ Cabinet's color
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

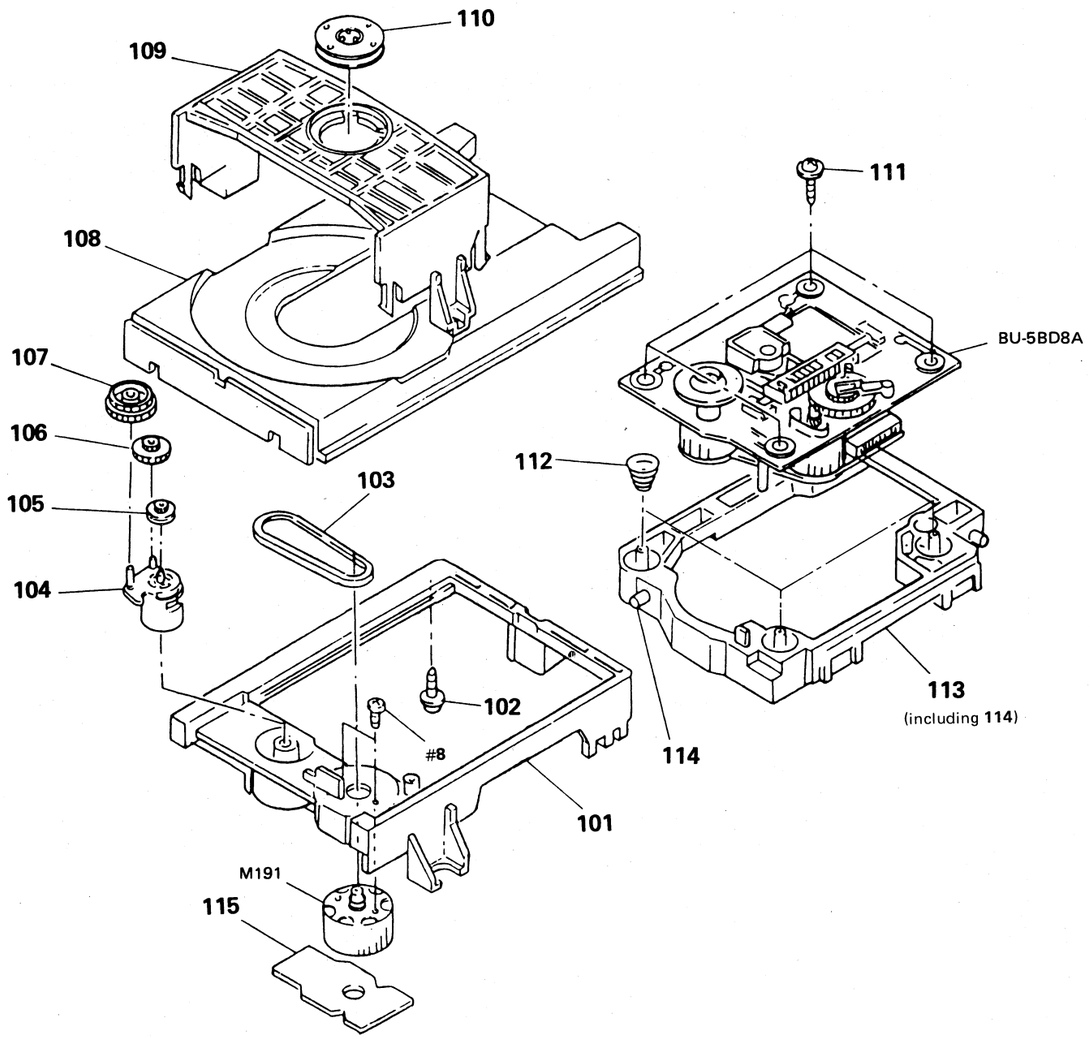
5-1. GENERAL SECTION



Ref.No.	Part No.	Description	Remark
1	4-947-166-01	PLATE, INDICATION	
2	4-947-167-01	PANEL, LOADING (US:BLACK)	
2	4-947-167-11	PANEL, LOADING (AEP,UK,G:BLACK)	
2	4-947-167-21	PANEL, LOADING (AEP,G:SILVER)	
3	X-4941-961-1	PANEL ASSY, FRONT (BLACK:AEP,UK,G)	
3	X-4942-161-2	PANEL ASSY, FRONT (SILVER)	
3	X-4942-162-1	PANEL ASSY, FRONT (BLACK:US)	
4	4-947-034-03	BUTTON (POWER) (BLACK)	
4	4-947-034-11	BUTTON (POWER) (SILVER)	
* 5	1-641-490-11	POWER SW BOARD	
6	4-928-635-01	SCREW, +BV (2.6X8) TAPPING	
7	3-363-099-01	SCREW (CASE +3X8 TP2) (MADE IN FRANCE:BLACK)	
7	3-363-099-11	SCREW (CASE +3X8 TP2) (MADE IN FRANCE:SILVER)	
7	3-704-366-01	SCREW (CASE) (M3X8) (MADE IN JAPAN)	
* 8	4-937-817-01	CASE (BLACK)	
* 8	4-937-817-41	CASE (SILVER)	
9	4-886-821-11	SCREW, S TIGHT, +PTTWH 3X6	
* 10	3-703-244-00	BUSHING (2104), CORD	
* 11	4-947-171-12	PANEL, BACK (MADE IN JAPAN:US)	
* 11	4-947-171-31	PANEL, BACK (MADE IN JAPAN:AEP)	
* 11	4-947-841-02	PANEL, BACK (MADE IN FRANCE)	
* 12	A-4649-010-A	MAIN BOARD, COMPLETE (MADE IN FRANCE)	
* 12	A-4649-173-A	MAIN BOARD, COMPLETE(MADE IN JAPAN:AEP)	
* 12	A-4649-330-A	MAIN BOARD, COMPLETE(MADE IN JAPAN:US)	
* 13	4-924-098-01	HOLDER, PC BOARD	
14	1-690-392-11	WIRE, FLAT TYPE (13 CORE)	
* 15	1-641-489-11	MOTOR VR BOARD	
* 16	1-641-491-11	HP BOARD	
17	A-4604-901-A	KNOB (VOL) ASSY (MADE IN JAPAN)	
17	A-4604-928-A	KNOB (VOL) ASSY (MADE IN FRANCE:BLACK)	
17	A-4660-088-A	KNOB (VOL) ASSY (MADE IN FRANCE:SILVER)	
* 18	A-4617-971-A	DISPLAY BOARD, COMPLETE (MADE IN JAPAN)	
* 18	A-4649-011-A	DISPLAY BOARD, COMPLETE(MADE IN FRANCE)	
19	1-575-002-11	WIRE, FLAT TYPE (22 CORE)	
* 20	4-947-170-01	HOLDER	
* 21	4-941-237-01	HEAT SINK	
* 22	4-922-980-01	HOLDER (LED)	
23	4-923-836-11	CUSHION	
24	4-943-148-32	FOOT (F58175SW) (US)	
FLD401	1-519-681-11	INDICATOR TUBE, FLUORESCENT	
⚠ CNP1	1-574-127-31	CORD, POWER (MADE IN FRANCE:AEP,G)	
⚠ CNP1	1-574-390-31	CORD, POWER (MADE IN FRANCE:UK)	
⚠ CNP1	1-575-651-21	CORD, POWER (MADE IN JAPAN:AEP)	
⚠ CNP1	1-590-836-11	CORD, POWER (MADE IN JAPAN:US)	
⚠ PT1	1-449-921-11	TRANSFORMER, POWER (MADE IN JAPAN:US)	
⚠ PT1	1-449-922-11	TRANSFORMER, POWER (MADE IN JAPAN:AEP)	
⚠ PT1	1-449-925-11	TRANSFORMER, POWER (MADE IN FRANCE)	

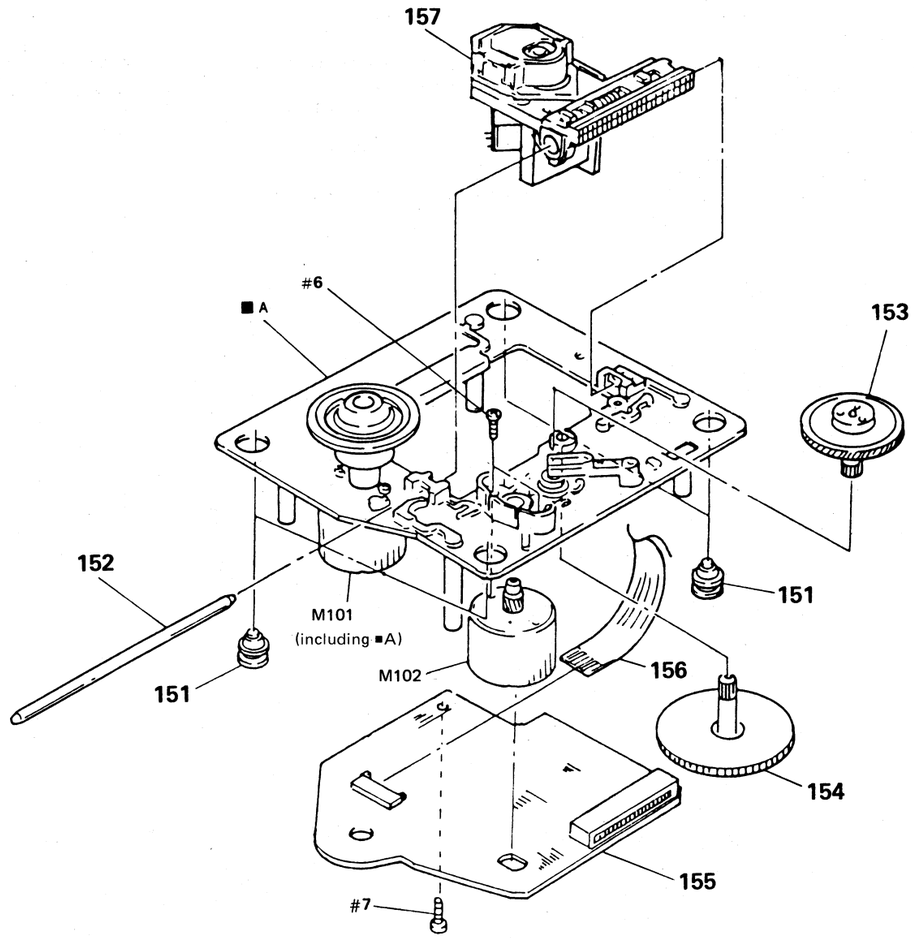
Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

5-2. CD MECHANISM SECTION (CDM14-5BD8A)



Ref.No.	Part No.	Description	Remark
101	4-933-111-01	CHASSIS (MD)	
* 102	4-917-583-21	BRACKET, YOKE	
103	4-927-649-01	BELT	
104	4-933-109-01	CAM	
105	4-927-651-01	PULLEY (S)	
106	4-927-628-01	GEAR (C)	
107	4-933-107-01	GEAR (PL)	
108	4-933-112-01	TABLE, DISK	
109	4-933-110-01	HOLDER (MG)	
* 110	1-452-538-11	MAGNET	
111	4-933-134-01	SCREW (+PTPWH M2.6X6)	
112	4-948-503-01	SPRING (BU), COMPRESSION (MADE IN JAPAN)	
113	4-933-129-01	HOLDER (BU)	
114	4-933-108-01	SHAFT (CAM)	
* 115	1-632-202-11	LOADING BOARD	
M191	A-4604-363-A	MOTOR (L) ASSY	

5-3. OPTICAL PICK-UP BLOCK (BU-5BD8A)



Ref.No.	Part No.	Description	Remark
151	4-933-126-01	INSULATOR (A)	
152	4-917-565-01	SHAFT, SLED	
153	4-917-567-01	GEAR (M)	
154	4-917-564-01	GEAR (P), FLATNESS	
* 155	A-4617-977-A	BD BOARD, COMPLETE (MADE IN JAPAN)	
* 155	A-4617-986-A	BD BOARD, COMPLETE (MADE IN FRANCE)	
156	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
⚠ 157	8-848-144-11	DEVICE, OPTICAL KSS-240A	
M101	X-4917-523-3	BASE OUTSERT ASSY (SPINDLE)	
M102	X-4917-504-1	MOTOR ASSY (SLED)	

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

SECTION 6
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- –XX, –X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F: nonflammable
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: μ, for example:
  uA...: μA..., uPA...: μPA...,
  uPB...: μPB..., uPC...: μPC...,
  uPD...: μPD...
- CAPACITORS
  uF: μF
- COILS
  uH: μH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

Ref. No.	Part No.	Description			Remark
*	A-4617-977-A	BD BOARD, COMPLETE (MADE IN JAPAN)			
		**********			
*	A-4617-986-A	BD BOARD, COMPLETE (MADE IN FRANCE)			
		**********			
		< CAPACITOR >			
C101	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C102	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C103	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C104	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C105	1-135-155-21	TANTALUM CHIP	4.7uF	10%	16V
C106	1-164-346-11	CERAMIC CHIP	1uF		16V
C107	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C108	1-164-346-11	CERAMIC CHIP	1uF		16V
C112	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C151	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C152	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C153	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C154	1-164-336-11	CERAMIC CHIP	0.33uF		25V
C155	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C156	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C157	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C158	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C159	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C160	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C181	1-163-038-00	CERAMIC CHIP	0.1uF		25V
		< CONNECTOR >			
CN101	1-568-796-11	SOCKET, CONNECTOR 22P			
CN102	1-568-795-11	SOCKET, CONNECTOR 12P			
CN103	1-564-721-11	PIN, CONNECTOR (SMALL TYPE) 5P			

Ref. No.	Part No.	Description				Remark
		< IC >				
IC101	8-752-344-48	IC CXD2501Q				
IC102	8-759-040-80	IC BA6297FP				
IC103	8-759-040-83	IC BA6287F				
		< RESISTOR >				
R101	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R102	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R103	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R104	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R105	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R112	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R113	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R114	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R117	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R118	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R121	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R122	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R151	1-216-070-00	METAL CHIP	7.5K	5%	1/10W	
R152	1-216-070-00	METAL CHIP	7.5K	5%	1/10W	
R153	1-216-070-00	METAL CHIP	7.5K	5%	1/10W	
R154	1-216-070-00	METAL CHIP	7.5K	5%	1/10W	
R155	1-216-070-00	METAL CHIP	7.5K	5%	1/10W	
R156	1-216-070-00	METAL CHIP	7.5K	5%	1/10W	
R157	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R158	1-216-076-00	METAL CHIP	13K	5%	1/10W	
R159	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R160	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R161	1-216-093-00	METAL CHIP	68K	5%	1/10W	
R162	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R163	1-216-308-00	METAL CHIP	4.7	5%	1/10W	

BD DISPLAY

Ref.No.	Part No.	Description	Remark
R181	1-216-021-00	METAL CHIP 68 5% 1/10W	
R182	1-216-021-00	METAL CHIP 68 5% 1/10W	
		< SWITCH >	
S101	1-572-085-11	SWITCH, LEAF (LIMIT)	
**********			
*	A-4617-971-A	DISPLAY BOARD, COMPLETE (MADE IN JAPAN)	
		**********	
*	A-4649-011-A	DISPLAY BOARD, COMPLETE (MADE IN FRANCE)	
		**********	
*	4-947-170-01	HOLDER	
		< CAPACITOR >	
C401	1-126-154-11	ELECT 47uF 20% 6.3V	
C402	1-161-494-00	CERAMIC 0.022uF 25V	
		< CONNECTOR >	
CN401	1-535-872-11	JUMPER, FILM (WITH TERMINAL) 29P	
		< DIODE >	
D401	8-719-987-63	DIODE 1N4148M (MADE IN JAPAN)	
D401	8-719-987-06	DIODE WG713A (MADE IN FRANCE)	
D402	8-719-987-63	DIODE 1N4148M (MADE IN JAPAN)	
D402	8-719-987-06	DIODE WG713A (MADE IN FRANCE)	
D403	8-719-987-63	DIODE 1N4148M (MADE IN JAPAN)	
D403	8-719-987-06	DIODE WG713A (MADE IN FRANCE)	
D404	8-719-987-63	DIODE 1N4148M (MADE IN JAPAN)	
D404	8-719-987-06	DIODE WG713A (MADE IN FRANCE)	
D405	8-719-987-63	DIODE 1N4148M (MADE IN JAPAN)	
D405	8-719-987-06	DIODE WG713A (MADE IN FRANCE)	
D406	8-719-987-63	DIODE 1N4148M (MADE IN JAPAN)	
D406	8-719-987-06	DIODE WG713A (MADE IN FRANCE)	
D407	8-719-987-63	DIODE 1N4148M (MADE IN JAPAN)	
D407	8-719-987-06	DIODE WG713A (MADE IN FRANCE)	
D408	8-719-987-63	DIODE 1N4148M (MADE IN JAPAN)	
D408	8-719-987-06	DIODE WG713A (MADE IN FRANCE)	
D409	8-719-987-63	DIODE 1N4148M (MADE IN JAPAN)	
D409	8-719-987-06	DIODE WG713A (MADE IN FRANCE)	
D410	8-719-987-63	DIODE 1N4148M (MADE IN JAPAN)	
D410	8-719-987-06	DIODE WG713A (MADE IN FRANCE)	
D411	8-719-987-63	DIODE 1N4148M (MADE IN JAPAN)	
D411	8-719-987-06	DIODE WG713A (MADE IN FRANCE)	
D412	8-719-121-24	DIODE RD9.1ES-L (MADE IN JAPAN)	
D412	8-719-921-69	DIODE MTZJ-T-77-9.1 (MADE IN FRANCE)	
		< INDICATOR >	
FLD401	1-519-681-11	INDICATOR TUBE, FLUORESCENT	

Ref.No.	Part No.	Description	Remark
		< IC >	
IC401	8-759-061-40	IC uPD75216ACW-C73	
		< RESISTOR >	
R401	1-249-435-11	CARBON 33K 5% 1/4W	
R402	1-249-435-11	CARBON 33K 5% 1/4W	
R403	1-249-435-11	CARBON 33K 5% 1/4W	
R404	1-249-435-11	CARBON 33K 5% 1/4W	
R405	1-249-435-11	CARBON 33K 5% 1/4W	
R406	1-249-425-11	CARBON 4.7K 5% 1/4W	
R407	1-249-425-11	CARBON 4.7K 5% 1/4W	
R408	1-249-439-11	CARBON 68K 5% 1/4W	
		< SWITCH >	
S401	1-554-303-21	SWITCH, TACTILE (CONTINUE)	
S402	1-554-303-21	SWITCH, TACTILE (REPEAT)	
S403	1-554-303-21	SWITCH, TACTILE	
S404	1-554-303-21	SWITCH, TACTILE	
S405	1-554-303-21	SWITCH, TACTILE (SHUFFLE)	
S406	1-554-303-21	SWITCH, TACTILE (FADER)	
S407	1-554-303-21	SWITCH, TACTILE	
S408	1-554-303-21	SWITCH, TACTILE	
S409	1-554-303-21	SWITCH, TACTILE (PROGRAM)	
S410	1-554-303-21	SWITCH, TACTILE (TIME)	
S411	1-554-303-21	SWITCH, TACTILE	
S412	1-554-303-21	SWITCH, TACTILE (OPEN/CLOSE)	
S413	1-554-303-21	SWITCH, TACTILE	
S414	1-554-303-21	SWITCH, TACTILE	
S415	1-554-303-21	SWITCH, TACTILE (EDIT/TIME FADE)	
S416	1-554-303-21	SWITCH, TACTILE (TIME SET)	
S417	1-554-303-21	SWITCH, TACTILE (PEAK SEARCH)	
S418	1-554-303-21	SWITCH, TACTILE (MUSIC SCAN)	
S419	1-554-303-21	SWITCH, TACTILE (1)	
S420	1-554-303-21	SWITCH, TACTILE (6)	
S421	1-554-303-21	SWITCH, TACTILE (11)	
S422	1-554-303-21	SWITCH, TACTILE (16)	
S423	1-554-303-21	SWITCH, TACTILE (2)	
S424	1-554-303-21	SWITCH, TACTILE (7)	
S425	1-554-303-21	SWITCH, TACTILE (12)	
S426	1-554-303-21	SWITCH, TACTILE (17)	
S427	1-554-303-21	SWITCH, TACTILE (3)	
S428	1-554-303-21	SWITCH, TACTILE (8)	
S429	1-554-303-21	SWITCH, TACTILE (13)	
S430	1-554-303-21	SWITCH, TACTILE (18)	
S431	1-554-303-21	SWITCH, TACTILE (4)	
S432	1-554-303-21	SWITCH, TACTILE (9)	
S433	1-554-303-21	SWITCH, TACTILE (14)	
S434	1-554-303-21	SWITCH, TACTILE (19)	

DISPLAY | HP | LOADING | MAIN

Ref.No.	Part No.	Description	Remark
S435	1-554-303-21	SWITCH, TACTILE (5)	
S436	1-554-303-21	SWITCH, TACTILE (10)	
S437	1-554-303-21	SWITCH, TACTILE (15)	
S438	1-554-303-21	SWITCH, TACTILE (20)	
S439	1-554-303-21	SWITCH, TACTILE (>20)	
S440	1-554-303-21	SWITCH, TACTILE (CHECK)	
S441	1-554-303-21	SWITCH, TACTILE (CLEAR)	
S442	1-554-303-21	SWITCH, TACTILE (AUTO SPACE/AUTO CUE)	
		< CRYSTAL >	
X401	1-577-358-21	VIBRATOR, CERAMIC (4MHz) (MADE IN JAPAN)	
X401	1-577-082-11	VIBRATOR, CERAMIC (4MHz) (MADE IN FRANCE)	
**********			
*	1-641-491-11	HP BOARD	
		********	
		< CAPACITOR >	
C481	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C482	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C483	1-164-159-11	CERAMIC 0.1uF 50V	
		< CONNECTOR >	
* CN481	1-568-941-11	PIN, CONNECTOR 3P	
		< JACK >	
J481	1-568-519-41	JACK, LARGE TYPE (PHONES)	
		< RESISTOR >	
R481	1-249-402-11	CARBON 56 5% 1/4W	
R482	1-249-402-11	CARBON 56 5% 1/4W	
**********			
*	1-632-202-11	LOADING BOARD	
		**********	
		< CONNECTOR >	
* CN301	1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P	
		< SWITCH >	
S271	1-572-086-11	SWITCH, LEAF (OUT)	
S272	1-572-086-11	SWITCH, LEAF (IN)	
**********			
*	A-4649-330-A	MAIN BOARD, COMPLETE (MADE IN JAPAN:US)	
		**********	
*	A-4649-010-A	MAIN BOARD, COMPLETE (MADE IN FRANCE)	
		**********	

Ref.No.	Part No.	Description	Remark
*	A-4649-173-A	MAIN BOARD, COMPLETE (MADE IN JAPAN:AEP)	
		**********	
*	4-941-237-01	HEAT SINK	
	7-682-547-09	SCREW +B 3X6	
		< CAPACITOR >	
C201	1-124-572-11	ELECT 100uF 20% 63V	
C202	1-126-059-11	ELECT 10uF 20% 50V (MADE IN JAPAN)	
C202	1-124-907-11	ELECT 10uF 20% 50V (MADE IN FRANCE)	
C203	1-124-360-00	ELECT 1000uF 20% 16V (MADE IN JAPAN)	
C204	1-126-937-11	ELECT 4700uF 20% 16V (MADE IN JAPAN)	
C204	1-124-898-11	ELECT 4700uF 20% 16V (MADE IN FRANCE)	
C205	1-126-163-11	ELECT 4.7uF 20% 50V (MADE IN JAPAN)	
C205	1-124-927-11	ELECT 4.7uF 20% 100V (MADE IN FRANCE)	
C206	1-126-059-11	ELECT 10uF 20% 50V (MADE IN JAPAN)	
C206	1-124-907-11	ELECT 10uF 20% 50V (MADE IN FRANCE)	
C207	1-126-059-11	ELECT 10uF 20% 50V (MADE IN JAPAN)	
C207	1-124-907-11	ELECT 10uF 20% 50V (MADE IN FRANCE)	
C208	1-124-997-11	ELECT 470uF 20% 10V (MADE IN JAPAN)	
C208	1-124-472-11	ELECT 470uF 20% 10V (MADE IN FRANCE)	
C209	1-124-997-11	ELECT 470uF 20% 10V (MADE IN JAPAN)	
C209	1-124-472-11	ELECT 470uF 20% 10V (MADE IN FRANCE)	
C211	1-124-997-11	ELECT 470uF 20% 10V (MADE IN JAPAN)	
C211	1-124-472-11	ELECT 470uF 20% 10V (MADE IN FRANCE)	
C212	1-124-997-11	ELECT 470uF 20% 10V (MADE IN JAPAN)	
C212	1-124-472-11	ELECT 470uF 20% 10V (MADE IN FRANCE)	
C213	1-130-487-00	MYLAR 0.022uF 5% 50V	
C214	1-126-023-11	ELECT 100uF 20% 16V (MADE IN JAPAN)	
C214	1-126-101-11	ELECT 100uF 20% 16V (MADE IN FRANCE)	
C221	1-164-159-11	CERAMIC 0.1uF 50V	
C301	1-126-022-11	ELECT 47uF 20% 16V (MADE IN JAPAN)	
C301	1-124-477-11	ELECT 47uF 20% 25V (MADE IN FRANCE)	
C302	1-126-301-11	ELECT 1uF 20% 50V (MADE IN JAPAN)	
C302	1-124-903-11	ELECT 1uF 20% 50V (MADE IN FRANCE)	
C303	1-164-159-11	CERAMIC 0.1uF 50V	
C304	1-164-159-11	CERAMIC 0.1uF 50V	
C305	1-126-022-11	ELECT 47uF 20% 16V (MADE IN JAPAN)	
C305	1-124-477-11	ELECT 47uF 20% 25V (MADE IN FRANCE)	
C306	1-164-159-11	CERAMIC 0.1uF 50V	
C307	1-164-159-11	CERAMIC 0.1uF 50V	
C308	1-164-159-11	CERAMIC 0.1uF 50V	
C309	1-164-159-11	CERAMIC 0.1uF 50V	
C311	1-130-491-00	MYLAR 0.047uF 5% 50V	
C312	1-161-374-11	CERAMIC 0.0015uF 20% 50V	
C313	1-161-494-00	CERAMIC 0.022uF 25V	
C314	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C315	1-126-300-11	ELECT 0.47uF 20% 50V (MADE IN JAPAN)	
C315	1-124-902-00	ELECT 0.47uF 20% 50V (MADE IN FRANCE)	
C316	1-161-494-00	CERAMIC 0.022uF 25V	

MAIN

Ref.No.	Part No.	Description	Remark
C317	1-164-159-11	CERAMIC 0.1uF 50V	
C319	1-162-282-31	CERAMIC 100PF 10% 50V	
C320	1-130-483-00	MYLAR 0.01uF 5% 50V	
C321	1-162-208-31	CERAMIC 24PF 5% 50V	
C322	1-126-022-11	ELECT 47uF 20% 16V	(MADE IN JAPAN)
C322	1-124-477-11	ELECT 47uF 20% 25V	(MADE IN FRANCE)
C323	1-164-159-11	CERAMIC 0.1uF 50V	
C324	1-164-159-11	CERAMIC 0.1uF 50V	
C325	1-162-205-31	CERAMIC 18PF 5% 50V	
C326	1-162-205-31	CERAMIC 18PF 5% 50V	
C327	1-161-494-00	CERAMIC 0.022uF 25V	
C328	1-126-059-11	ELECT 10uF 20% 50V	(MADE IN JAPAN)
C328	1-124-907-11	ELECT 10uF 20% 50V	(MADE IN FRANCE)
C329	1-126-022-11	ELECT 47uF 20% 16V	(MADE IN JAPAN)
C329	1-124-477-11	ELECT 47uF 20% 25V	(MADE IN FRANCE)
C331	1-161-494-00	CERAMIC 0.022uF 25V	
C332	1-164-159-11	CERAMIC 0.1uF 50V	
C333	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C351	1-126-022-11	ELECT 47uF 20% 16V	(MADE IN JAPAN)
C351	1-124-477-11	ELECT 47uF 20% 25V	(MADE IN FRANCE)
C352	1-164-159-11	CERAMIC 0.1uF 50V	
C353	1-126-022-11	ELECT 47uF 20% 16V	(MADE IN JAPAN)
C353	1-124-477-11	ELECT 47uF 20% 25V	(MADE IN FRANCE)
C354	1-161-494-00	CERAMIC 0.022uF 25V	
C355	1-126-022-11	ELECT 47uF 20% 16V	(MADE IN JAPAN)
C355	1-124-477-11	ELECT 47uF 20% 25V	(MADE IN FRANCE)
C356	1-164-159-11	CERAMIC 0.1uF 50V	
C357	1-130-495-00	MYLAR 0.1uF 5% 50V	
C358	1-130-495-00	MYLAR 0.1uF 5% 50V	
C361	1-162-280-21	CERAMIC 82PF 10% 50V	
C362	1-162-280-21	CERAMIC 82PF 10% 50V	
C363	1-162-213-21	CERAMIC 39PF 10% 50V	
C364	1-162-213-21	CERAMIC 39PF 10% 50V	
C365	1-162-213-21	CERAMIC 39PF 10% 50V	
C366	1-162-213-21	CERAMIC 39PF 10% 50V	
C367	1-161-494-00	CERAMIC 0.022uF 25V	
C368	1-161-494-00	CERAMIC 0.022uF 25V	
C371	1-130-479-00	MYLAR 0.0047uF 5% 50V	
C372	1-130-479-00	MYLAR 0.0047uF 5% 50V	
C373	1-130-472-00	MYLAR 0.0012uF 5% 50V	
C374	1-130-472-00	MYLAR 0.0012uF 5% 50V	
C377	1-126-022-11	ELECT 47uF 20% 16V	(MADE IN JAPAN)
C377	1-124-477-11	ELECT 47uF 20% 25V	(MADE IN FRANCE)
C378	1-126-022-11	ELECT 47uF 20% 16V	(MADE IN JAPAN)
C378	1-124-477-11	ELECT 47uF 20% 25V	(MADE IN FRANCE)
C379	1-130-473-00	MYLAR 0.0015uF 5% 50V	
C380	1-130-473-00	MYLAR 0.0015uF 5% 50V	
C391	1-162-286-31	CERAMIC 220PF 10% 50V	(US)
C392	1-164-159-11	CERAMIC 0.1uF 50V	(US)
C393	1-164-159-11	CERAMIC 0.1uF 50V	(US)
C394	1-164-159-11	CERAMIC 0.1uF 50V	(US)
		< CONNECTOR >	
* CN201	1-580-230-11	PIN, CONNECTOR (PC BOARD) 3P	
* CN301	1-568-822-11	SOCKET, CONNECTOR 22P	
* CN302	1-568-844-11	SOCKET, CONNECTOR 29P	
* CN381	1-568-832-11	SOCKET, CONNECTOR 13P	
		< DIODE >	
D201	8-719-200-82	DIODE 11ES2	
D202	8-719-110-03	DIODE RD7.5ES-B2	(MADE IN JAPAN)
D202	8-719-923-49	DIODE MTZJ-T-77-7.5	(MADE IN FRANCE)
D203	8-719-200-82	DIODE 11ES2	
D204	8-719-200-82	DIODE 11ES2	
D205	8-719-200-82	DIODE 11ES2	
D206	8-719-200-82	DIODE 11ES2	
D208	8-719-109-89	DIODE RD5.6ES-B2	
D209	8-719-987-63	DIODE 1N4148M	(MADE IN JAPAN)
D209	8-719-987-06	DIODE WG713A	(MADE IN FRANCE)
D328	8-719-987-63	DIODE 1N4148M	(MADE IN JAPAN)
D328	8-719-987-06	DIODE WG713A	(MADE IN FRANCE)
D344	8-719-987-63	DIODE 1N4148M	(MADE IN JAPAN)
D344	8-719-987-06	DIODE WG713A	(MADE IN FRANCE)
		< IC >	
IC201	8-759-633-42	IC M5293L	
IC202	8-759-630-21	IC M5290P-16	
IC203	8-759-945-58	IC RC4558P	
IC204	8-759-604-86	IC M5F7807	
IC301	8-752-337-26	IC CXD2500AQ	
IC302	8-752-342-65	IC CXD2560M	
IC303	8-752-349-01	IC CXD2561AM	
IC306	8-759-503-91	IC TL082ACP	
IC307	8-759-945-58	IC RC4558P	
IC391	8-749-921-20	IC T-1550	(US)
		< JACK >	
* J381	1-569-443-11	JACK, PIN 4P	(LINE OUT)
		< COIL >	
L305	1-408-403-00	INDUCTOR 3.3uH	(US)
L306	1-408-403-00	INDUCTOR 3.3uH	
L321	1-408-403-00	INDUCTOR 3.3uH	
		< TRANSISTOR >	
Q201	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q202	8-729-140-96	TRANSISTOR 2SD774-34	
Q203	8-729-141-83	TRANSISTOR 2SB1094-LK	

Ref.No.	Part No.	Description	Remark
Q204	8-729-900-65	TRANSISTOR DTA144ES	
Q205	8-729-900-89	TRANSISTOR DTC144ES	
Q206	8-729-900-89	TRANSISTOR DTC144ES	
Q209	8-729-281-52	TRANSISTOR 2SC1815-Y	
Q341	8-729-900-65	TRANSISTOR DTA144ES	
Q342	8-729-900-65	TRANSISTOR DTA144ES	
Q343	8-729-900-65	TRANSISTOR DTA144ES	
Q344	8-729-900-89	TRANSISTOR DTC144ES	
Q371	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q372	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q373	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q374	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q375	8-729-231-55	TRANSISTOR 2SC2878-AB	
Q376	8-729-231-55	TRANSISTOR 2SC2878-AB	
Q393	8-729-119-76	TRANSISTOR 2SA1175-HFE (US)	
		< RESISTOR >	
R201	1-249-435-11	CARBON 33K 5% 1/4W	
R202	1-249-438-11	CARBON 56K 5% 1/4W	
R203	1-249-429-11	CARBON 10K 5% 1/4W	
R204	1-249-425-11	CARBON 4.7K 5% 1/4W	
R205	1-249-425-11	CARBON 4.7K 5% 1/4W	
R208	1-249-423-11	CARBON 3.3K 5% 1/4W	
R209	1-249-413-11	CARBON 470 5% 1/4W	
R210	1-249-429-11	CARBON 10K 5% 1/4W	
R211	1-249-410-11	CARBON 270 5% 1/4W	
R213	1-249-417-11	CARBON 1K 5% 1/4W	
R214	1-249-417-11	CARBON 1K 5% 1/4W	
R301	1-249-417-11	CARBON 1K 5% 1/4W	
R302	1-249-417-11	CARBON 1K 5% 1/4W	
R303	1-249-421-11	CARBON 2.2K 5% 1/4W	
R304	1-249-417-11	CARBON 1K 5% 1/4W	
R305	1-249-411-11	CARBON 330 5% 1/4W (US)	
R306	1-249-413-11	CARBON 470 5% 1/4W	
R309	1-249-405-11	CARBON 100 5% 1/4W	
R311	1-249-423-11	CARBON 3.3K 5% 1/4W	
R312	1-249-429-11	CARBON 10K 5% 1/4W	
R313	1-249-423-11	CARBON 3.3K 5% 1/4W	
R314	1-249-429-11	CARBON 10K 5% 1/4W	
R315	1-249-417-11	CARBON 1K 5% 1/4W	
R316	1-249-417-11	CARBON 1K 5% 1/4W	
R317	1-249-419-11	CARBON 1.5K 5% 1/4W	
R318	1-249-441-11	CARBON 100K 5% 1/4W	
R319	1-247-903-00	CARBON 1M 5% 1/4W	
R320	1-249-417-11	CARBON 1K 5% 1/4W	
R321	1-249-417-11	CARBON 1K 5% 1/4W	
R322	1-249-417-11	CARBON 1K 5% 1/4W	
R323	1-249-417-11	CARBON 1K 5% 1/4W	

Ref.No.	Part No.	Description	Remark
R324	1-249-417-11	CARBON 1K 5% 1/4W	
R325	1-249-417-11	CARBON 1K 5% 1/4W	
R326	1-249-417-11	CARBON 1K 5% 1/4W	
R327	1-247-903-00	CARBON 1M 5% 1/4W	
R328	1-249-429-11	CARBON 10K 5% 1/4W	
R331	1-249-429-11	CARBON 10K 5% 1/4W	
R332	1-249-429-11	CARBON 10K 5% 1/4W	
R333	1-249-429-11	CARBON 10K 5% 1/4W	
R334	1-249-429-11	CARBON 10K 5% 1/4W	
R343	1-249-441-11	CARBON 100K 5% 1/4W	
R344	1-249-441-11	CARBON 100K 5% 1/4W	
R345	1-249-425-11	CARBON 4.7K 5% 1/4W	
R346	1-249-425-11	CARBON 4.7K 5% 1/4W	
R347	1-249-441-11	CARBON 100K 5% 1/4W	
R348	1-249-429-11	CARBON 10K 5% 1/4W	
R351	1-247-869-11	CARBON 39K 5% 1/4W	
R352	1-247-869-11	CARBON 39K 5% 1/4W	
R353	1-247-869-11	CARBON 39K 5% 1/4W	
R354	1-247-869-11	CARBON 39K 5% 1/4W	
R355	1-247-869-11	CARBON 39K 5% 1/4W	
R356	1-247-869-11	CARBON 39K 5% 1/4W	
R357	1-247-869-11	CARBON 39K 5% 1/4W	
R358	1-247-869-11	CARBON 39K 5% 1/4W	
R361	1-247-859-11	CARBON 15K 5% 1/4W	
R362	1-247-859-11	CARBON 15K 5% 1/4W	
R363	1-247-859-11	CARBON 15K 5% 1/4W	
R364	1-247-859-11	CARBON 15K 5% 1/4W	
R365	1-247-873-11	CARBON 56K 5% 1/4W	
R366	1-247-873-11	CARBON 56K 5% 1/4W	
R367	1-247-873-11	CARBON 56K 5% 1/4W	
R368	1-247-873-11	CARBON 56K 5% 1/4W	
R369	1-249-419-11	CARBON 1.5K 5% 1/4W	
R370	1-249-419-11	CARBON 1.5K 5% 1/4W	
R371	1-249-419-11	CARBON 1.5K 5% 1/4W	
R372	1-249-419-11	CARBON 1.5K 5% 1/4W	
R373	1-247-887-00	CARBON 220K 5% 1/4W	
R374	1-247-887-00	CARBON 220K 5% 1/4W	
R375	1-249-409-11	CARBON 220 5% 1/4W	
R376	1-249-409-11	CARBON 220 5% 1/4W	
R377	1-249-409-11	CARBON 220 5% 1/4W	
R378	1-249-409-11	CARBON 220 5% 1/4W	
R379	1-249-425-11	CARBON 4.7K 5% 1/4W	
R380	1-249-425-11	CARBON 4.7K 5% 1/4W	
R381	1-249-425-11	CARBON 4.7K 5% 1/4W	
R382	1-249-425-11	CARBON 4.7K 5% 1/4W	
R383	1-249-413-11	CARBON 470 5% 1/4W	
R384	1-249-413-11	CARBON 470 5% 1/4W	
R385	1-249-393-11	CARBON 10 5% 1/4W	
R386	1-249-393-11	CARBON 10 5% 1/4W	

MAIN MOTOR VR POWER SW

Ref.No.	Part No.	Description	Remark
R389	1-249-413-11	CARBON 470 5% 1/4W	
R390	1-249-413-11	CARBON 470 5% 1/4W	
R392	1-249-405-11	CARBON 100 5% 1/4W (US)	
R393	1-249-406-11	CARBON 120 5% 1/4W (US)	
R394	1-249-435-11	CARBON 33K 5% 1/4W (US)	
		< CRYSTAL >	
X327	1-579-314-11	VIBRATOR, CRYSTAL (22.5MHz)	
**********			
*	1-641-489-11	MOTOR VR BOARD	
		**********	
*	4-922-980-01	HOLDER (LED)	
		< CAPACITOR >	
C451	1-124-994-11	ELECT 100uF 20% 10V (MADE IN JAPAN)	
C451	1-124-443-00	ELECT 100uF 20% 10V (MADE IN FRANCE)	
C452	1-124-994-11	ELECT 100uF 20% 10V (MADE IN JAPAN)	
C452	1-124-443-00	ELECT 100uF 20% 10V (MADE IN FRANCE)	
C471	1-124-994-11	ELECT 100uF 20% 10V (MADE IN JAPAN)	
C471	1-124-443-00	ELECT 100uF 20% 10V (MADE IN FRANCE)	
C472	1-124-277-11	ELECT 4.7uF 20% 35V	
		< CONNECTOR >	
* CN451	1-568-832-11	SOCKET, CONNECTOR 13P	
* CN472	1-568-941-11	PIN, CONNECTOR 3P	
		< DIODE >	
D471	8-719-970-49	DIODE BR4361F	
		< IC >	
IC451	8-759-981-89	IC RC4556S	
IC471	8-759-962-08	IC BA6208	
		< RESISTOR >	
R451	1-249-435-11	CARBON 33K 5% 1/4W	
R452	1-249-435-11	CARBON 33K 5% 1/4W	
R453	1-249-432-11	CARBON 18K 5% 1/4W	
R454	1-249-432-11	CARBON 18K 5% 1/4W	
R455	1-249-422-11	CARBON 2.7K 5% 1/4W	
R456	1-249-422-11	CARBON 2.7K 5% 1/4W	
R457	1-249-429-11	CARBON 10K 5% 1/4W	
R458	1-249-429-11	CARBON 10K 5% 1/4W	
R461	1-249-399-11	CARBON 33 5% 1/4W	
R462	1-249-399-11	CARBON 33 5% 1/4W	
R471	1-249-411-11	CARBON 330 5% 1/4W	
R472	1-249-417-11	CARBON 1K 5% 1/4W	
R473	1-249-417-11	CARBON 1K 5% 1/4W	

Ref.No.	Part No.	Description	Remark
		< VARIABLE RESISTOR >	
RV451	1-238-974-11	RES, VAR, CARBON 10K/10K (LINE OUT/PHONE LEVEL)	
**********			
*	1-641-490-11	POWER SW BOARD	
		**********	
		< CAPACITOR >	
C403	1-161-494-00	CERAMIC 0.022uF 25V	
		< CONNECTOR >	
* CN404	1-568-955-11	PIN, CONNECTOR 6P	
		< IC >	
IC402	8-749-922-36	IC GP1U50XB	
		< SWITCH >	
S491	1-554-118-00	SWITCH, PUSH (1 KEY) (POWER)	
**********			
		MISCELLANEOUS	
		**********	
* 110	1-452-538-11	MAGNET	
14	1-690-392-11	WIRE, FLAT TYPE (13 CORE)	
156	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
157	8-848-144-11	DEVICE, OPTICAL KSS-240A	
19	1-575-002-11	WIRE, FLAT TYPE (22 CORE)	
⚠ CNP1	1-574-127-31	CORD, POWER (MADE IN FRANCE:AEP,G)	
⚠ CNP1	1-574-390-31	CORD, POWER (MADE IN FRANCE:UK)	
⚠ CNP1	1-575-651-21	CORD, POWER (MADE IN JAPAN:AEP)	
⚠ CNP1	1-590-836-11	CORD, POWER (MADE IN JAPAN:US)	
M101	X-4917-523-3	BASE OUTSERT ASSY (SPINDLE)	
M102	X-4917-504-1	MOTOR ASSY (SLED)	
M191	A-4604-363-A	MOTOR (L) ASSY	
⚠ PT1	1-449-921-11	TRANSFORMER, POWER (MADE IN JAPAN:US)	
⚠ PT1	1-449-922-11	TRANSFORMER, POWER (MADE IN JAPAN:AEP)	
⚠ PT1	1-449-925-11	TRANSFORMER, POWER (MADE IN FRANCE)	
**********			
		ACCESSORIES & PACKING MATERIALS	
		**********	
	1-465-867-11	REMOTE COMMANDER (RM-D597)	
	1-558-271-11	CORD, CONNECTION (MADE IN FRANCE)	
	1-559-533-11	CORD, CONNECTION (MADE IN JAPAN)	
	2-181-754-01	COVER, BATTERY	

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
	3-753-907-11	MANUAL, INSTRUCTION (MADE IN JAPAN:AEP) (ENGLISH, FRENCH, SPANISH, PORTUGUESE)	
	3-753-907-21	MANUAL, INSTRUCTION (MADE IN JAPAN:US) (ENGLISH)	
	3-753-907-41	MANUAL, INSTRUCTION (MADE IN JAPAN:AEP) (GERMAN, DUTCH, SWEDISH, ITALIAN)	
	3-753-907-51	MANUAL, INSTRUCTION (MADE IN FRANCE:AEP, UK) (ENGLISH, FRENCH, SPANISH, PORTUGUESE)	
	3-753-907-61	MANUAL, INSTRUCTION (MADE IN FRANCE:AEP) (GERMAN, DUTCH, SWEDISH, ITALIAN)	
	3-753-907-81	MANUAL, INSTRUCTION (MADE IN FRANCE:G) (GERMAN)	
*	4-941-548-01	LABEL, CLASS 1 (EXCEPT US)	
*	4-941-925-01	CUSHION	
*	4-948-308-11	INDIVIDUAL CARTON (MADE IN JAPAN)	
*	4-948-881-02	INDIVIDUAL CARTON (MADE IN FRANCE)	

****

HARDWARE LIST

****

#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S
#2	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S
#3	7-682-548-04	SCREW +BVTT 3X8 (S)
#4	7-682-548-09	SCREW +BVTT 3X8 (S)
#5	7-682-547-09	SCREW +B 3X6
#6	7-621-255-15	SCREW +P 2X3
#7	7-685-134-19	SCREW +BTP 2.6X8 TYPE2 N-S
#8	7-621-775-10	SCREW +B 2.6X4